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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,539	07/27/2001	R. Dennis Nesbitt	P-3611-2-D1-3-C1 SLD 2 01	3362

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EXAMINER	
DUONG, THANH P	
ART UNIT	PAPER NUMBER
3711	9

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/917,539	NESBITT ET AL.
	Examiner	Art Unit
	Tom P Duong	3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-6, 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (5,820,489) in view of Cavallaro (5,688,191) and Cavallaro (5,810,678) and Harris et al. (5,856,388). Sullivan discloses a golf ball having a core with PGA compression 45-85 or its Riehle compression 115-75 (Col. 5, lines 14-20) and a diameter of 1.54-1.545 inch (Col. 4, lines 54-55), a cover layer containing a high acid ionomer with Shore D hardness about 65 or greater and cover thickness of 0.08-0.13 inch (Col. 5, lines 22-26 and Abstract), Col. 23, lines 21-22). Sullivan does not disclose a mantle layer but one of ordinary skill in the art recognizes that a golf ball can be fabricated with plurality of layers including a mantle layer which impact playing characteristics. Cavallaro '191 teaches that it is desirable to include a mantle layer which believes to have an effect on the "feel" of the golf ball. (Col. 8, lines 6-24). Cavallaro '678 also makes it clear that conventional two-piece balls provide maximum distance but the two-piece balls have a hard "feel" when struck by a club (Col. 1, lines 23-45). Cavallaro '678 further teaches that it is desirable to fabricate a multiplayer golf ball having a soft mantle layer to overcome the conventional two-piece hard "feel" (Col. 4, lines 28-38). In addition, Harris et al. '388 also makes it clear that golf ball

manufacturers introduced a multiplayer golf balls with multiple intermediate layers or mantle layers in an effort to overcome the undesirable hard "feel" aspect of a conventional two-piece balls. Thus, it would have been obvious in view of Cavallaro '191 and/or Cavallaro '678 and/or Harris '388 to one having ordinary skill in the art at the time of the invention was made to incorporate a mantle layer as taught by Cavallaro '191 or Cavallaro '678 or Harris '388 into Sullivan's invention in order to provide a soft "feel" upon impacting a club against the golf ball. Regarding claims 2-6, Cavallaro '191 discloses a mantle laver of thermoset materials (Abstract) with a mantle layer thickness of 0.025 to 0.125 inch (Col. 7, lines 34-36) and a styrene-butadiene material (Col. 4, lines 27-30), thermoplastic material of polybutylene terephthalate (Col. 4, lines 56-67). Applicant should note that the type of fillers in the mantle layer is a design choice since the selection of fillers is determined by filler cost, specific gravity, and polymer dispersity.

2. Claims 7 and 19-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art as applied in claim 1, above and further in view of Shama (4,848,770) and Schenk (4,085,937) and Boehm et al. (5,683,312). With respect to claims 7, 19-22, and 28-29, Sullivan and Cavallaro disclose the claimed invention except a vitreous or glassy mantle layer or ceramic layer but Sullivan does disclose the use of fillers such as limestone and silica in the core formulation (Col. 9, lines 19-22) and limestone is an inexpensive filler. Shama 770' teaches that a mantle layer contains a filler (Col. 3, lines 1-6 and Col. 3, lines 25-26) to control the weight of the finished golf ball, provide the compression, and cut resistance of the golf ball. In addition, it is also known in the art

that filler also provide reinforcement of the golf ball. Schenk 937' also teaches the use of filler such as precipitated silica in the formulation to reinforce the structure of the golf ball. Schenk also teaches use of glass microspheres in the formulation to provide cut resistance and control the weight of the golf ball (Col. 5, lines 57-67). Thus, it would have been obvious in view of Sharma and Schenk to one having ordinary skill in the art to incorporate the filler of Sharma with specific filler types of silica and glass microspheres of Schenk to control the weight, improve compression, and cut resistance as taught by Sharma and Schenk. Claims 23, 24 and 25-27 recite limitations similar to claims 10, 1, and 16-18. Thus, claims 23, 24, and 25-27 are rejected for the same reasons as applied in claims 10, 1, and 16-18, above. With respect to claim 28, the prior art disclose the claimed invention except the use of metal filler in the mantle layer; however, Boehm teaches the use of aluminum (Col. 4, lines 27-30). Thus, it would have been obvious in view of Sharma, Schenk, and Boehm to incorporate a metal filler as taught by Boehm in Sullivan and Cavallaro golf ball to control weight and provide reinforcement for the golf ball. With respect claim 29, each metal has its own specific gravity, and the selection of metal and/or alloy and its amount in the formulation must result a finished golf ball that complies with USGA weight limits. Claim 30 recites limitations similar to claim 14; thus, claim 30 is rejected for the same reasons as applied in claim 14, above.

Response to Arguments

Applicant's arguments filed on 2/6/03 have been fully considered but they are not persuasive. (1) Official Notice is replaced with Cavallaro '678 and Harris et al. '388 as teaching references for mantle layer. Cavallaro '191 and Cavallaro '678 and Harris '388 clearly teaches that the introduction of a mantle layer (intermediate layer) in a conventional two-piece golf ball provide a multi-layer golf balls with a soft "feel" over a two-piece ball which provides a hard "feel" from ball impact against a golf club. Thus, it would have been obvious and desirable in view of Cavallaro '191 and Cavallaro '678 and Harris et al. '388 to one having ordinary skill in the art to incorporate the mantle layer to provide a golf ball with a soft "feel" over a hard "feel" of a conventional two-piece golf ball. (2) Applicant argues that the addition of a mantle layer to Sullivan '489 would result a golf ball too large. Sullivan clearly discloses under USGA rules that there is no restriction on the maximum diameter of a golf ball. (Col. 1, lines 62-67). (3) Sullivan '489 clearly discloses the core's Riehle compression of at least 75. This Riehle compression is the measurement for the core and it is independent from the other layers. (3) Regarding claim 29, USGA rules require a ball weigh cannot exceed more than 1.620 ounces. It is known to use metal filler in the golf ball to control the weight and moment of inertia. A higher specific gravity metal provides a ball with more weight and higher moment of inertia than a lower specific gravity metal. The cost of metal material, its availability, and its dispersity characteristics in polymer blend are the key factors in determining the choice of metal used in the formulation of a mantle layer. Thus, the selection of metal for the mantle layer is a design choice.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (703) 305-4559. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Sewell can be reached on (703) 308-2126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 873-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

Tom Duong
April 10, 2003

Paul T. Sewell
Supervisory Patent Examiner
Group 3700